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PTO/SB/05 (2/98)
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR § 1.53(b))

Attorney Docket No.	8012-001
First Inventor or Application Identifier	William B. Franklin et al.
Title	USE OF VECTOR GRAPHICS IN PAPER PRINTING AND WEBSITE DEVELOPMENT
Express Mail Label No.	EL 576728897 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: **Commissioner for Patents, Box Patent Application, Washington, DC 20231**

1. ☒ *Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing)
2. ☒ Specification [*Total Pages* 18] *(preferred arrangement set forth below)*
   - — Descriptive title to the Invention
   - — Cross References to Related Applications
   - — Statement Regarding Fed sponsored R & D
   - — Reference to Microfiche Appendix
   - — Background of the Invention
   - — Brief Summary of the Invention
   - — Brief Description of the Drawings *(if filed)*
   - — Detailed Description
   - — Claim(s)
   - — Abstract of the Disclosure
3. ☒ Drawing(s) *(35 U.S.C. 113)* [*Total Sheets* 2]
4. Oath or Declaration [*Total Pages* 1]
   - a. ☒ Newly executed (original or copy)
   - b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d)) *(for continuation/divisional with Box 17 completed)* ***[Note Box 5 below]***
     - i. ☐ DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).
5. ☐ Incorporation By Reference *(useable if Box 4b is checked)* The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. ☐ Microfiche Computer Program *(Appendix)*
7. Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all necessary)*
   - a. ☐ Computer Readable Copy
   - b. ☐ Paper Copy (identical to computer copy)
   - c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☒ Assignment Papers (cover sheet & document(s))
9. ☒ 37 C.F.R. § 3.73(b) Statement ☒ Power of Attorney *(when there is an assignee)*
10. ☐ English Translation Document *(if applicable)*
11. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
12. ☒ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
14. ☒ *Small Entity Statement(s) ☐ Statement filed in prior application, Status still proper and desired
15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. ☐ Other: _____

**NOTE FOR ITEMS 1 & 14: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).*

17. If a CONTINUING APPLICATION, *check appropriate box and supply the requisite information below and in a preliminary statement:*
    ☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: _____ / _____
    Prior application information: *Examiner:* *Group/Art Unit:*

18. CORRESPONDENCE ADDRESS

☐ *Customer Number or Bar Code Label* 04678 *(Insert Customer No. or Attach bar code label here)* or ☒ *Correspondence address below*

NAME	RHODES & MASON, P.L.L.C.				
ADDRESS	1600 First Union Tower 300 North Greene Street				
CITY	Greensboro	*STATE*	NC	*ZIP CODE*	27401
COUNTRY	USA	*TELEPHONE*	336-273-4422	*FAX*	336-271-2830

Name (Print/Type)	Howard A. MacCord, Jr.	*Registration No. (Attorney/Agent)*	28,639
Signature		*Date*	September 29, 2000

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25381

PTO/SB/17 (12/99)
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Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL for FY 2000

Patent fees are subject to annual revision.

Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. See Forms PTO/SB/09-12. See 37 C.F.R. §§ 1.27 and 1.28.

TOTAL AMOUNT OF PAYMENT ($)727.00

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	William B. Franklin *et al.*
Examiner Name	
Group/Art Unit	
Attorney Docket No.	8012-001

METHOD OF PAYMENT (check one)

1. ☒ The Commission is hereby authorized to charge indicated fees and credit any over payments to.

Deposit Account Number: 18-1164

Deposit Account Name: Rhodes & Mason, P.L.L.C.

☒ Charge Any Additional Fee Required Under 37 CFR §§1.16 and 1.17

2. ☒ Payment Enclosed:
☒ Check ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Fee Code	Large Entity Fee ($)	Small Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	690	201	345	Utility filing fee	345.00
106	310	206	155	Design filing fee	
107	480	207	240	Plant filing fee	
108	690	208	345	Reissue filing fee	
114	150	214	75	Provisional filing fee	
				SUBTOTAL (1)	($)345.00

2. EXTRA CLAIM FEES

	Extra Claims		Fee from below		Fee Paid
Total Claims	32	-20** =	12	X 9.00 =	108.00
Independent Claims	9	-3** =	6	X 39.00 =	234.00
Multiple Dependent Claims				=	

** or number previously paid, if greater; For Reissues, see below

Large Fee Code	Large Entity Fee ($)	Small Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	78	202	39	Independent claims in excess of 3
104	260	204	130	Multiple dependent claim
109	78	209	39	**Reissue independent claims over original patent
110	18	210	9	**Reissue claims in excess of 20 and over original patent
				SUBTOTAL (2) ($)342.00

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Fee Code	Large Entity Fee ($)	Small Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examination action	
115	110	215	55	Extension for reply within first month	
116	380	216	190	Extension for reply within second month	
117	870	217	435	Extension for reply within third month	
118	1,360	218	680	Extension for reply within fourth month	
128	1,850	228	925	Extension for reply within fifth month	
119	300	219	150	Notice of Appeal	
120	300	220	150	Filing a brief in support of an appeal	
121	260	221	130	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,210	241	605	Petition to revive - unintentional	
142	1,210	242	605	Utility issue fee (or reissue)	
143	430	243	215	Design issue fee	
144	580	244	290	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	240	126	240	Submission of Information Disclosure Stmt.	
581	40	581	40	Recording each patent assignment per property (times number of properties)	40 00
146	690	246	345	Filing a submission after final rejection (37 CFR §1.129(a))	
149	690	249	345	For each additional invention to be examined (37 CFR §1.129(b))	
Other fee (specify)					
Other fee (specify)					

*Reduced by Basic Filing Fee Paid **SUBTOTAL (3)** ($)40 00

SUBMITTED BY				Complete (if applicable)	
Name (Print/Type)	Howard A. MacCord, Jr.	*Registration No. (Attorney/Agent)*	28,639	*Telephone*	336-273-4422
Signature	X			*Date*	Sept. 29, 2000

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25384

PTO/SB/10 (1-99)
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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

STATEMENT CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) & 1.27(c))—SMALL BUSINESS CONCERN

Docket Number (Optional)
8012-001

Applicant, Patentee, or Identifier: William B. Franklin et al.

Application or Patent No.:

Filed or Issued:

Title: USE OF VECTOR GRAPHICS IN PAPER PRINTING AND WEBSITE DEVELOPMENT

I hereby state that I am

☐ the owner of the small business concern identified below:

☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN 809, L.L.C.

ADDRESS OF SMALL BUSINESS CONCERN 800 North Main Street

High Point, NC 27262

I hereby state that the above identified small business concern qualifies as a small business concern as defined in 13 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trademark Office. Questions related to size standards for a small business concern may be directed to: Small Business Administration, Size Standards Staff, 409 Third Street, SW, Washington, DC 20416.

I hereby state that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

☒ the specification filed herewith with title as listed above.

☐ the application identified above.

☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern, or organization having rights in the invention must file separate statements as to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization having any rights in the invention is listed below:

☒ no such person, concern, or organization exists.

☐ each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

NAME OF PERSON SIGNING William B. Franklin

TITLE OF PERSON IF OTHER THAN OWNER President MANAGER

ADDRESS OF PERSON SIGNING 800 North Main Street, High Point, NC 27262

SIGNATURE x W B Franklin DATE x 9/29/00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: William B. Franklin *et al.*
For: **USE OF VECTOR GRAPHICS IN PAPER PRINTING AND WEBSITE DEVELOPMENT**
Filed concurrently herewith.
Serial Number to be assigned.

Commissioner for Patents
Washington, DC 20231

PRELIMINARY AMENDMENT

Sir:

Please enter the following amendment prior to reviewing the application. If any fees in addition to those accompanying the attached application are required, the Commissioner is hereby authorized to charge them to Deposit Account 18-1164 and consider this a petition therefor.

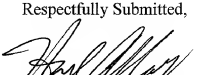
In the Specification:

On page 8, line 29, please delete "E" and insert --F--.

Remarks

Applicant respectfully requests consideration of the application.

Respectfully Submitted,



Howard A. MacCord, Jr.
Reg. No. 28,639

Rhodes & Mason, P.L.L.C.
P.O. Box 2974
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(336) 273-4422

Date: September 29, 2000
File No. 8012-001

25394

USE OF VECTOR GRAPHICS IN PAPER PRINTING AND WEBSITE DEVELOPMENT

Background of the Invention

The present invention relates to conversion of vector graphics files to files suitable for display on a computer, such as a computer running an Internet browser.

In the furniture industry, furniture manufacturers have for years generated very carefully planned and designed catalogs to aid in the promotion and sale of their products. Catalog design has become quite sophisticated, with particularized placement of text and graphics on the pages being chosen by the catalog designers to achieve specialized visual effects. Among the effects desired are the overlay of one photograph over a part of another.

With the advent of the Internet and e-commerce endeavors, it is desired to replicate such catalogs on the Internet so that viewers and potential customers on the Internet will have identically the same image available to them as would be available in the printed catalog.

Similarly, it may be desirable for many other types of print media to be transported to a browser-display with fidelity to the original.

The state-of-the-art in printing, particularly with respect to catalogs, but for other printed products also, involves the use of digital electronics. The image to be printed is stored in an electronic file in a vector graphics format. In vector graphics, mathematical equations and file pointers are used to collate the text and images to be printed on the printed page. These files can then be used to make the separations used in the printing process according to known techniques.

The size of the digital files for such printed pages, even using vector graphics, can be on the order of 25 million bytes, too large for transmission at reasonable speeds over commonly available digital networks. Also, among the 25 million bytes of information is much more detail than can typically be displayed on a monitor used in an Internet or other browser system. Typically, browsers display information in much less resolution, such as in

the jpeg or gif format, having more on the order of 25,000 bytes of information, which can be reasonably quickly transmitted over digital networks.

Similarly, the browsers display images according to instructions imbedded in a markup language, typically html. In html, code is written to determine the color, size, and placement of various items on a page, and such code is typically written or edited in a manual mode, although some page editor programs are now available. Nonetheless, creation of an html page or other markup language page to replicate with high fidelity the images of a printed catalog or other printed publication is very difficult and time consuming. Essentially, the html page must be prepared from scratch, requiring trial and error to determine how well the browser-displayed page replicates the printed page. Errors must be corrected by rewriting code.

Accordingly, there is a need in the art for a system that will expedite the conversion of printed page digital files to those which can be displayed in html or other markup language format on browsers.

Also, there is a need in the art for an economical way to replicate printed catalog pages and other printed pages in a browser display with high fidelity.

Summary of the Invention

The present invention fulfills this need in the art by providing a method of creating a web page from a vector graphics data file including converting the vector graphics data file from its native file format to a bit map graphics file format, modifying the bitmap graphics data file by converting color values to a format that can be displayed on a computer monitor, and inserting the modified bit map graphics data file into the web page. Typically, compression of the modified bitmap graphics data file takes place prior to inserting. Further, compressing may precede modifying. Alternatively, modifying may precede converting. The vector graphics data file need not be used to print on paper to be within the scope of the invention.

Desirably, the bit map graphics file is compressed by reducing the resolution of an image encoded in the file to less than 100 dots per inch (dpi). Preferably, the bit map graphics file is compressed by reducing the resolution of an image encoded in the file to about 72 dpi.

In one embodiment, the bit map graphics file is compressed by converting the bit map graphics file to a joint photographic experts (jpeg) file. This may occur by opening the bit map graphics file in a paint program and exporting the bit map graphics file to a jpeg file format.

In another embodiment, the bit mapped graphics file is compressed by converting the bit mapped graphics file to a graphics interchange format (gif) file. Alternatively, the bit mapped graphics file may be compressed by converting the bit mapped graphics file to a tagged image file (tif) format file or an X bitmap (xbm) file.

Typically, the compressed and modified bit map graphics data file is inserted into the web page by tagging the file as an inline image. The inline image may be a link to a higher resolution version of an image that is substantially the same as the inline image. Typically, the compressed and modified bit map graphics data file is inserted into the web page by tagging the file as an external image.

In a preferred embodiment the vector graphics data file is a prepress data file. The prepress data file may be created using a software application program selected from the group consisting of QuarkXPress, Adobe Illustrator, Macromedia Freehand, Adobe PageMaker, Corel Draw and Adobe Acrobat.

The web page is usually a markup language file. The markup language may be one selected from the group consisting of hypertext markup language (html), extensible markup language (xml), Cold Fusion markup language (cfml), commerce xml (cxml), handheld device markup language (hdml), standard generalized markup language (sgml), synchronized multimedia integration language (smil), extensible hypertext markup language (xhtml), extensible style langue (xsl), and wireless markup language (wml).

The bit map graphics file is preferably an encapsulated postscript (eps) file. In one embodiment when the eps file is rendered, it makes an 8.5" by 11" image.

In a preferred embodiment, the vector graphics data file is a prepress data file, the bit map graphics file is an encapsulated post script (eps) file, and the prepress data file is converted to an eps file by exporting the prepress data file in its native file format to an eps format. In another embodiment, the vector graphics data file is a prepress data file, the bit map graphics file is in a tagged image file format (tif), and the prepress data file is converted to a tif file by exporting the prepress data file in its native file format to an tif format. In a preferred embodiment, the prepress data file is used to print paper copies, but that is not required to be within the scope of the invention.

Typically, the bit map graphics file is modified by converting the cyan, magenta, yellow, black (CMYK) color values to red, green, blue (RGB) color values. The CMYK color values may be converted to RGB color values by a paint program.

The markup language may be selected from the group consisting of hypertext markup language (html), extensible markup language (xml), Cold Fusion markup language (cfml), commerce xml (cxml), handheld device markup language (hdml), standard generalized markup language (sgml), synchronized multimedia integration language (smil), extensible hypertext markup language (xhtml), extensible style langue (xsl), and wireless markup language (wml).

The invention also provides a method of creating a web page from a composite file made up of a vector graphics data file and an image file including converting the vector graphics data file from its native file format to a bit map graphics file format, modifying the bitmap graphics data file by converting color values to a format that can be displayed on a computer monitor, and inserting the modified bit map graphics data file into the web page.

The invention also provides a method of displaying a plurality of products on a website in connection the offering for sale of the plurality of products including creating a vector graphics data file, wherein the vector graphics data file includes data capable of being converted to a press plate to create a catalog printed on paper, deriving from the vector graphics data file an electronic catalog, wherein the electronic catalog appears to be substantially identical to the catalog printed on paper, and making the electronic catalog available for viewing using a browser.

Further, the invention provides a method of displaying a plurality of products on a website in connection the offering for sale of the plurality of products including creating a composite file comprised of a vector graphics data file and an image file, wherein the composite file is capable of being converted to a press plate for a catalog printed on paper, deriving from the composite file an electronic catalog, wherein the electronic catalog appears to be substantially identical to the catalog printed on paper, and making the electronic catalog available for viewing using a browser.

The invention also includes a method for creating a web page from a vector graphics data file, including converting the vector graphics data file from its native file format to a bit map graphics file format including both text and images, modifying the bitmap graphics data file by converting color values to a format that can be displayed on

a computer monitor, correcting errors in the text that occur when the vector graphics data file was converted from its native file format to a bit map graphics file format, and inserting the modified bit map graphics data file into the web page.

The invention also provides a method of communicating including displaying on a web browser a web page. The web page was made by creating the web page from a vector graphics data file, including the steps outlined above.

The invention also provides an article of manufacture including a terminal connected to a network and including a video display terminal. The video display terminal displays a displayed web page made by creating the web page from a vector graphics data file, as outlined above.

Brief Description of the Drawings

The invention will be better understood by a reading of the Detailed Description of the Preferred Embodiments along with a review of the drawings, in which:

FIGURE 1 is a high level flow chart of a process according to a preferred embodiment of the invention; and

FIGURE 2 is a schematic view of a computer terminal connected to a network to display a web page.

Detailed Description of the Preferred Embodiment

Figure 1 shows a flow chart of the steps involved in connection with a preferred embodiment of the invention. First, the vector graphics data files are assembled to be available for use in a step A. Vector graphics, also known as object-oriented graphics, refers to software and hardware that use geometrical formulas to represent images. Vector graphics are created and manipulated in software called "draw" programs. The vector graphics data files will be composites of text, fonts, and graphics, with the vector graphics directing their assembly in a desired layout and appearance.

In a preferred embodiment, the vector graphics files are created using a draw program, such as the QuarkXpress computer software program available from Quark, Inc. of Denver, Colorado. Such programs are commonly used in the prepress industry. Other comparable programs can be used, such as Adobe Illustrator, Macromedia Freehand, Adobe PageMaker, Corel Draw, and Adobe Acrobat. The process will be

described with reference to QuarkXpress. In a preferred embodiment, the files should be established or modified so that "scale" is 100%, and "bleed" is set at 0. The "format" should be Color, with a PICT Preview. The "data" should be Binary, with OPI to Include Images. "Spread" should be left unchecked, unless it is a spread page, in which case it must be checked. Each page should be saved as an 8½ x 11 eps format if it is desired to simulate that orientation. Alternatively, if a spread is desired, made up of two side-by-side 8½ x 11 pages, then the file should be saved as 17 x 11 format.

By exporting from the draw program, the files can be saved as eps files in step B. "Eps" stands for "encapsulated postscript," a file format used by Adobe programs. The export of the prepress data file is typically an export from the native file format to an eps format.

In step C, the eps file is opened in Adobe Photoshop and converted to a jpeg file and simultaneously converted from CMYK color space to RGB for use in website displays. That is, bit map graphics file is converted to a jpeg file by opening the bit map graphics file in a paint program and exporting the bit map graphics file to a jpeg file format. A paint program is a graphics program that displays pictures on the display screen which are represented as bit-maps. Adobe Photoshop has built-in capabilities to perform these transformations. Other paint programs can be used.

Other browser-friendly file formats can be substituted for jpeg, such as a graphics interchange format (gif) file. Alternatively, the bit mapped graphics file may be compressed by converting the bit mapped graphics file to a tagged image file (tif) format file or an X bitmap (xbm) file.

CMYK stands for cyan, magenta, yellow and black, which are the ink colors typically used in ink printing. RGB stands for red, green, blue, the colors that are typically combined to form a range of colors on video monitors. The resolution is stepped down from the high resolution of the eps and vector graphics files to one on the order of 72 dots per inch (dpi). This greatly reduces the file size, enabling faster transmission over networks like the Internet and reduces storage requirements. Other resolutions can be used, such as 100 dpi or less. The compression and color-space conversion may take place simultaneously. Alternatively, one can precede the other.

The jpeg files are displayed on a computer monitor in step D, where they can be compared with computer monitor displays of the vector graphics file or a printed catalog or other printed material derived from the vector graphics files. If errors are detected,

they can be corrected using various error correction routines in steps E, F, and G. These error correction routines will be discussed in more detail hereinafter. If these are successful as detected in a further error evaluation step G, the file is saved as a jpeg in step C', like previous step C.

If the initial check for errors in block D indicates that no errors are present, then processing continues directly to block H. This saved jpeg file can then be loaded on a web server in step H.

Often, prepress work is performed on Apple MacIntosh computers, and web servers commonly are personal computers. In a situation of this sort, it is desirable to transfer files from the MacIntosh to the PC using conventional file saving and transfer techniques, as will be apparent to those of ordinary skill in the art.

In order to create the html code, a commercially available program called PageMill is opened on the web server. Other suitable editor programs for html or other markup languages can be substituted.

Working on the web server, a pre-existing markup language code template may be selected from a collection of pre-existing templates. The template approximates the page layout of the desired catalog. Alternatively, if there are no pre-existing templates, a new one can be created. These templates typically are simple and do not include a particularized layout of text and graphics on the page. Rather, they include an indication as to whether the site may have a table of contents, links to other pages within the website, or links to enlarged versions of images on the website page. As such, they are simple to create and edit. More complex files can be used if desired.

Various browser-usable codes such as hypertext markup language (html), extensible markup language (xml), Cold Fusion markup language (cfml), commerce markup language xml (cxml), handheld device markup language (hdml), standard generalized markup language (sgml), synchronized multimedia integration language (smil), extensible hypertext markup language (xhtml), extensible style language (xsl), and wireless markup language (wml) may be used as the markup language.

The process then moves to step J. This involves creating the catalog html's with images in place and tabs created, using the markup language editor. That is, the jpeg images are keyed to frames in the templates, where they are desired to be located. Frames may be linked and cross linked as desired. No lengthy code writing is needed. Rather, the compressed and modified bit map graphics data file is inserted into the web

page by tagging the file as an inline image. The inline image may be a link to a higher resolution version of an image that is substantially the same as the inline image.

A compressed and modified bit map graphics file is preferably inserted into the web page by tagging the file as an inline image. The inline image may be a link to a higher resolution version of an image that is substantially the same as the inline image, except usually larger in viewed size. Also, the compressed and modified bit map graphics data file may be inserted into the web page by tagging the file as an external image.

Once the general format has been selected, catalog links can be established, whether to other websites or elsewhere back and forth within the catalog or other website document being created.

If a splash page is desired, it can be attached as a lead-in page at step K. This can be done by opening an existing splash page and modifying the opened file and saving it as the splash page for the new website. If no existing splash page exists, it is simple html code writing to establish one.

Step L establishes a homepage for the catalog. This involves opening an existing online html, creating and resaving as the new online html, and linking the online html to the catalog html. Then, the existing online entry page is opened and created and saved as a new entry page, and linked to the online html.

Thereupon, in step M, the website can be activated. Once the entry html is loaded on a web server, the web server is or rebooted to activate all of the links in the html website. Preferably, the newly created website is checked using various types of browsers and browser configurations to ascertain that the pages display as desired. For example, the page can be viewed on an Apple MacIntosh® computer or a personal computer PC while using web browsers such as Netscape® Navigator®, and Microsoft® Internet Explorer.

Error Correction

The error correction routines of step E will now be discussed. Typical errors arise from and are exhibited as poor displays of text material. The errors can be distortions in fonts, shaping, or sizes. Another error that sometimes may occur and require correction is that gradual color changes are not gradual in the browser display, but rather stair-step in gradation, called a graduated screen. Depending on the nature of

the prepress files being used, various error correction routines can be used. For example, if the prepress has been a QuarkXpress file, then the error correction routine E may be as follows:

close the opened eps file, restart Quark, and resave the files in eps. If the errors continue to persist, then close the file again and open the files in an alternate version of Photoshop.

If the errors continue to exist, revert back to the Quark files and save the Quark files as postscript files, not eps files. Open them again in Photoshop to see if the errors persist. If the errors continue, convert the postscript file to pdf using Acrobat Distiller®. Then, open the pdf file in Photoshop and compare to the printed sample or document. If the error continues, save the Quark page as a pdf file using Acrobat pdf writer. Again, open the pdf file in Photoshop and compare with the printed sample.

If the error continues, try using the procedures on a different computer, particularly a different MacIntosh. This series of iterative steps should correct most errors. If errors persist, then the error may not be correctable.

If the prepress file is an Adobe Illustrator file, then the error correction routine E can take the form of exporting the file from Quark as a tif file and comparing it to the printed or displayed image to see if that works. If that does not work, then the Quark file can be exported as a PS5 file to ascertain if that works. If not, it can be exported as an Illustrator eps file and checked to see if the error is corrected. In each case, the exported file is to be opened in Photoshop and compared to the printed or displayed sample or document to check to see if the error has been corrected.

In the case of Adobe PageMaker as the prepress file, the Adobe PageMaker program can export the file as a pdf file. That pdf file is then opened in Photoshop and compared to a printed sample or document to ascertain if it is acceptable. That should correct most errors, but if not, the error may not be correctable.

In the case of the prepress program being Macromedia Freehand®, the files can be exported in any one of five formats, preferably in the following order, and then opened in Photoshop and compared to see if the format is correct. First, export as a PS eps. Second, export as a generic eps. Third, export as a tif. Fourth, export as a DCS2. Fifth, export as a Quark eps. Sixth, save as an editable eps. The exported file can be opened in Photoshop and compared to the printed sample or document and should be

corrected by one or the other of these alternate methods. In the event that it is not corrected, it may not be correctable.

Benefits and Uses

The resulting page on the website or other browser display will be of a relatively small size in comparison with prepress files, so that it will be transmittable in a reasonable amount of time. However, the image as displayed will be virtually indistinguishable from the printed page which has been copied. The only differences may be some possibly apparent loss of resolution or color deviations arising from errors in conversion from CMYK to RGB. However, such derivations are quite acceptable, and deemed to be minimal enough so that the browser image is substantially identical to the printed image obtained from the vector graphics file.

Preferably, in the outputting of the file as a jpeg or gif, the file is compressed considerably so that the transmission time is at a commercially acceptable level over digital networks. For example, the file can be compressed by reducing the resolution of an image encoded in the file to less than 100 dots/inch, preferably to about 72 dots/inch. The type of files in which the bit map graphics file is converted to a jpeg file can generically be referred to as a paint program, and suitable paint programs may be used. In addition to the jpeg and gif files, the compressed file can be a tagged image file or an X bit map file.

As will be appreciated, by converting the vector graphics file as a whole to a displayable jpeg or other bit-mapped file format, the layout achieved in the vector graphics file is exactly reproduced in the displayed bit-mapped file. This image is available for ready display via the markup language code to which it has been attached. Thus, the same layout is available in the browser display as in any printed product of the vector graphics display, without the need for writing markup language code to selectively place images and text, which could be a very time consuming and tedious task.

Also, because the file size has been reduced in the process, transmission times for the files are relatively short.

By the use of the file conversion steps set forth above, a method of doing business is created and enabled. That method of doing business involves the use of paper and browser accessible catalogs, which are substantially identical, with the

browser-accessible catalog being readily accessible in reasonable amounts of time over digital networks, such as the Worldwide Web. This enables a provider of goods and services in the catalog to reach customers through either medium, or both mediums, with consistent messages.

Figure 2 shows a computer arrangement 10 including keyboard 12, central processing unit 14, monitor 16, and network connection 18. When connected to a network making available pages created as outlined above, the result can be the display of pages on the monitor substantially identical to pages that may have been printed from the vector graphics files.

What is claimed is:

1. A method of creating a web page from a vector graphics data file comprising:

converting the vector graphics data file from its native file format to a bit map graphics file format;

modifying the bitmap graphics data file by converting color values to a format that can be displayed on a computer monitor; and

inserting the modified bit map graphics data file into the web page.

2. The method of claim 1, wherein the method is further comprised of compressing the modified bitmap graphics data file prior to inserting.

3. The method of claim 2, wherein compressing precedes modifying.

4. The method of claim 2, wherein the bit map graphics file is compressed by reducing the resolution of an image encoded in the file to less than 100 dots per inch (dpi).

5. The method of claim 4, wherein the bit map graphics file is compressed by reducing the resolution of an image encoded in the file to about 72 dpi.

6. The method of claim 2, wherein the bit map graphics file is compressed by converting the bit map graphics file to a joint photographic experts (jpeg) file.

7. The method of claim 6, wherein the bit map graphics file is converted to a jpeg file by opening the bit map graphics file in a paint program and exporting the bit map graphics file to a jpeg file format.

8. The method of claim 2, wherein the bit mapped graphics file is compressed by converting the bit mapped graphics file to a graphics interchange format (gif) file.

9. The method of claim 2, wherein the bit mapped graphics file is compressed by converting the bit mapped graphics file to a tagged image file (tif) format file.

10. The method of claim 2, wherein the bit mapped graphics file is compressed by converting the bit mapped graphics file to an X bitmap (xbm) file.

11. The method of claim 2, wherein the compressed and modified bit map graphics data file is inserted into the web page by tagging the file as an inline image.

12. The method of claim 11, wherein the inline image is a link to a higher resolution version of an image that is substantially the same as the inline image.

13. The method of claim 2, wherein the compressed and modified bit map graphics data file is inserted into the web page by tagging the file as an external image.

14. The method of claim 1, wherein modifying precedes converting.

15. The method of claim 1, wherein the vector graphics data file is a prepress data file.

16. The method of claim 15, wherein the prepress data file is creating using a software application program selected from the group consisting of QuarkXPress, Adobe Illustrator, Macromedia Freehand, Adobe PageMaker, Corel Draw and Adobe Acrobat.

17. The method of claim 1, wherein the web page is a markup language file.

18. The method of claim 17, wherein the markup language is selected from the group consisting of hypertext markup language (html), extensible markup language (xml), Cold Fusion markup language (cfml), commerce markup language xml (cxml), handheld device markup language (hdml), standard generalized markup language (sgml), synchronized multimedia integration language (smil), extensible hypertext markup language (xhtml), extensible style language (xsl), and wireless markup language (wml).

19. The method of claim 1, wherein the bit map graphics file is an encapsulated post script (eps) file.

20. The method of claim 19, wherein the eps file, when rendered, is an 8.5" by 11" image.

21. The method of claim 1, wherein the vector graphics data file is a prepress data file, the bit map graphics file is an encapsulated post script (eps) file, and the prepress data file is converted to an eps file by exporting the prepress data file in its native file format to an eps format.

22. The method of claim 1, wherein the vector graphics data file is a prepress data file, the bit map graphics file is in a tagged image file format (tif), and the prepress data file is converted to a tif file by exporting the prepress data file in its native file format to an tif format.

23. The method of claim 1, wherein the bit map graphics file is modified by converting the cyan, magenta, yellow, black (CMYK) color values to red, green, blue (RGB) color values.

24. The method of claim 23, wherein the CMYK color values are converted to RGB color values using a paint program.

25. A method of creating a web page from a vector graphics data file comprising:

converting the vector graphics data file from its native file format to a bit map graphics file format;

compressing the bitmap graphics file by reducing the resolution of an image encoded in the file to less than 100 dots per inch (dpi) by converting cyan, magenta, yellow, black (CMYK) color values to red, green, blue (RGB) color values; and

modifying the bit-mapped graphics file.

26. A method of creating a web page from a composite file comprised of vector graphics data file and an image file, the method comprising:

converting the vector graphics data file from its native file format to a bit map graphics file format;

modifying the bitmap graphics data file by converting color values to a format that can be displayed on a computer monitor; and

inserting the modified bit map graphics data file into a web page template.

27. A method for creating a plurality of web pages from a vector graphics data file, wherein the plurality of web pages is substantially identical to a printed publication rendered from the vector graphics data file comprising:

converting each of a plurality of pages of a printed publication rendered from the vector graphics data file from its native file format to a bit map graphics file format;

modifying each of the plurality of the bitmap graphics data file by converting color values to a format that can be displayed on a computer monitor;

inserting each of the plurality of the modified bit map graphics data file into a web page; and

linking the plurality of web pages such that the plurality of web pages is substantially identical to the layout and content of the printed publication.

28. A method of displaying a plurality of products on a website in connection the offering for sale of the plurality of products, the method comprising:

creating a vector graphics data file, wherein the vector graphics data file includes data capable of being converted to a press plate to create a catalog printed on paper;

deriving from the vector graphics data file an electronic catalog, wherein the electronic catalog appears to be substantially identical to the catalog printed on paper; and

making the electronic catalog available for viewing using a browser.

29. A method of displaying a plurality of products on a website in connection the offering for sale of the plurality of products comprising:

creating a composite file comprised of a vector graphics data file and an image file, wherein the composite file is capable of being converted to a press plate for a catalog printed on paper;

deriving from the composite file an electronic catalog, wherein the electronic catalog appears to be substantially identical to the catalog printed on paper; and

making the electronic catalog available for viewing using a browser.

30. A method for creating a web page from a vector graphics data file, comprising the steps of:

converting the vector graphics data file from its native file format to a bit map graphics file format including both text and images;

modifying the bitmap graphics data file by converting color values to a format that can be displayed on a computer monitor;

correcting errors in the text that occur when the vector graphics data file was converted from its native file format to a bit map graphics file format; and

inserting the modified bit map graphics data file into a web page.

31. A method of displaying communication comprising:

displaying on a web browser a web page made by creating the web page from a vector graphics data file, including the steps of:

converting the vector graphics data file from its native file format to a bit map graphics file format including both text and images;

modifying the bitmap graphics data file by converting color values to a format that can be displayed on a computer monitor; and

inserting the modified bit map graphics data file into a web page.

32. An article of manufacture comprising:

a terminal connected to a network and including a video display terminal, the video display terminal displaying a displayed web page made by creating the web page from a vector graphics data file, including the steps of:

converting the vector graphics data file from its native file format to a bit map graphics file format including both text and images;

modifying the bitmap graphics data file by converting color values to a format that can be displayed on a computer monitor; and

inserting the modified bit map graphics data file into the web page.

Abstract of the Disclosure

A method of creating a web page from a vector graphics data file includes converting the vector graphics data file from its native file format to a bit map graphics file format, modifying the bit map graphics data file by converting color values to a format that can be displayed on a computer monitor, and inserting the modified bit map graphics data file into the web page substantially identical to the catalog printed on paper; and making the electronic catalog available for viewing using a browser.

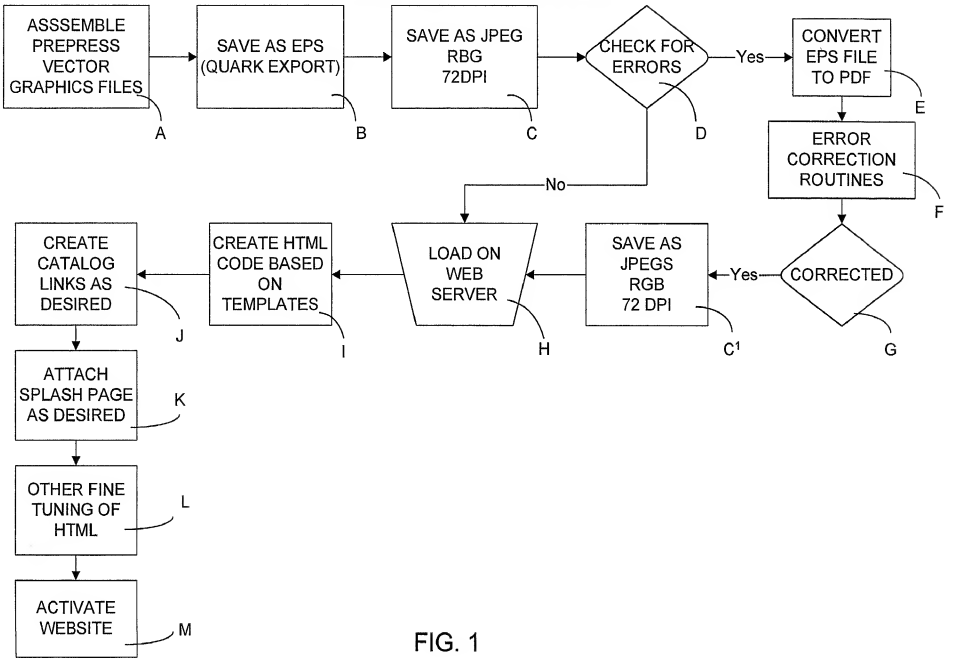
ASSSEMBLE PREPRESS VECTOR GRAPHICS FILES
A
SAVE AS EPS (QUARK EXPORT)
B
SAVE AS JPEG RBG 72DPI
C
CHECK FOR ERRORS
D
Yes
CONVERT EPS FILE TO PDF
E
ERROR CORRECTION ROUTINES
F
No
CORRECTED
G
SAVE AS JPEGS RGB 72 DPI
Yes
C1
LOAD ON WEB SERVER
H
CREATE HTML CODE BASED ON TEMPLATES
I
CREATE CATALOG LINKS AS DESIRED
J
ATTACH SPLASH PAGE AS DESIRED
K
OTHER FINE TUNING OF HTML
L
ACTIVATE WEBSITE
M

FIG. 1

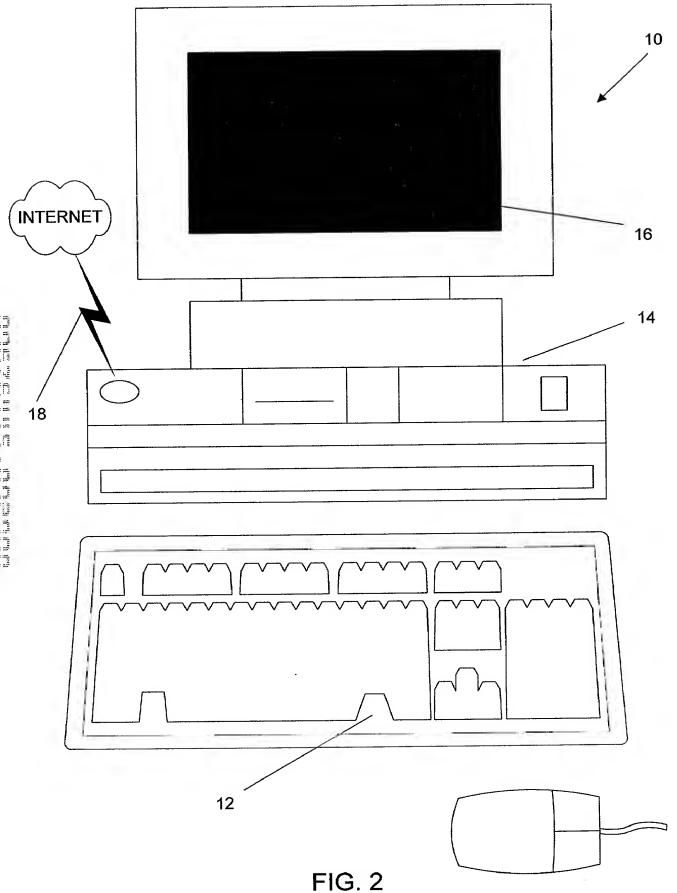

FIG. 2

RULE 63 (37 C.F.R. 1.63)
DECLARATION FOR PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled USE OF VECTOR GRAPHICS IN PAPER PRINTING AND WEBSITE DEVELOPMENT the specification of which (check applicable box(es)):

☒ is attached hereto.
☐ was filed on as U.S. Application Serial No.
☐ was filed as PCT international application No. PCT/ / on and (if applicable to U.S. or PCT application) was amended on

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 C.F.R. 1.56(a). I hereby claim foreign priority benefits under 35 U.S.C. 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed or, if no priority is claimed, before the filing date of this application:

Prior Foreign Application(s): Application Number	**Country**	**Day/Month/Year Filed**

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application listed below:

Prior Provisional Application(s): Application Serial No.	**Day/Month/Year Filed**

I hereby claim the benefit under 35 U.S.C. 120/365 of all prior United States and PCT international applications listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in such prior application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose material information as defined in 37 C.F.R. 1.56(a) which occurred between the filing date of the prior applications and the national or PCT international filing date of this application:

Prior U.S./PCT Application(s): Application Serial No.	**Date/Month/Year Filed**	**Status: patented, pending, abandoned**

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

1) Inventor's Signature x [signature] Date x 9-29-2000
Inventor's Name (typed): William (First) B. (Middle Initial) [signature] Franklin (Family Name) US (Citizenship)
Residence (City): Greensboro State/Foreign Country): North Carolina
Post Office Address: 1016 Harvest Time Way Zip Code: 27410

2) Inventor's Signature x [signature] Date x 9-29-2000
Inventor's Name (typed): Thomas (First) W. (Middle Initial) Oliver (Family Name) US (Citizenship)
Residence (City): Thomasville State/Foreign Country): North Carolina
Post Office Address: 137 Cedar Bluff Court Zip Code: 27360

3) Inventor's Signature _____ Date _____
Inventor's Name (typed): _____ (First) _____ (Middle Initial) _____ (Family Name) _____ (Citizenship)
Residence (City) _____ State/Foreign Country) _____
Post Office Address _____ Zip Code _____

FOR ADDITIONAL INVENTORS, check box ☐ and attach sheet with same information and signature and date for each.

Rhodes & Mason (4/98)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: William B. Franklin *et al.*
For: **USE OF VECTOR GRAPHICS IN PAPER PRINTING AND WEBSITE DEVELOPMENT**
Filed concurrently herewith.
Serial Number to be assigned.

Commissioner for Patents
Washington, D.C. 20231

POWER OF ATTORNEY

Sir:

The undersigned, assignee of the entire interest in and to an application of William B. Franklin *et al.* for U.S. Letters Patent for USE OF VECTOR GRAPHICS IN PAPER PRINTING AND WEBSITE DEVELOPMENT, by an assignment document being recorded contemporaneously herewith, hereby appoints the firm of Rhodes & Mason, P.L.L.C., comprising C. Robert Rhodes, Reg. No. 24,200, Edward W. Rilee, Reg. No. 31,869, Howard A. MacCord, Jr., Reg. No. 28,639, Jack B. Hicks, Reg. No. 34,180, James L. Lester, Reg. No. 38,721, William J. Mason, Reg. No. 22,948, Gilbert J. Andia, Jr., Reg. No. 38,815, Jeffrey R. McFadden, Reg. No. P-46,916, Benjamin S. Withrow, Reg. No. 40,876, Amy H. Fix, Reg. No. 42,616, Stanislav Antolin, Reg. No. 34,979, and Lewis S. Rowell, Reg. No. 45,469, as my attorneys and/or agents with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith.

Furthermore, in accordance with 37 CFR §3.73(b), the undersigned hereby states that the documentary evidence of a chain of title from the original owner to the assignee, i.e. assignment document referenced above, has been reviewed and the undersigned certifies that, to the best of assignee's knowledge and belief, title is in assignee who seeks to prosecute this application.

PLEASE ADDRESS ALL COMMUNICATIONS AND TELEPHONE CALLS TO: RHODES & MASON, P.L.L.C., P. O. BOX 2974, GREENSBORO, NORTH CAROLINA 27402, (336) 273-4422.

809, L.L.C.

BY: X William B. Franklin, Jr.
William B. Franklin
President, MANAGER

Date: X 9/29/00

File No.: 8012-001